

What is claimed is:

1. A method to detect a physiological state of a person, the method comprising:
providing thermal image data of at least a region of a face of a person; and
5 using the thermal image data to determine a physiological state of a person.
2. The method of claim 1, wherein using the thermal image data includes using
the thermal image data to determine anxiety in the person.
- 10 3. The method of claim 2, wherein providing the thermal image data includes
providing thermal image data of at least a region proximate an eye of the person.
4. The method of claim 3, wherein using the thermal image data includes
comparing the thermal image data to a baseline reference.
- 15 5. The method of claim 3, wherein providing the thermal image data includes
providing thermal image data of at least a periorbital region proximate the eye of the
person and of another region of the face, and further wherein using the thermal
image data to determine the physiological state of the person includes comparing the
20 thermal image data of the periorbital region to thermal data of the other region of the
face.
6. The method of claim 5, wherein the other region of the face is a cheek region
of the face.
- 25 7. The method of claim 1, wherein using the thermal image data includes
comparing the thermal image data to a baseline reference.

8. The method of claim 1, wherein providing the thermal image data includes providing thermal image data of at least one region of the face, and further wherein using the thermal image data to determine the physiological state of the person includes comparing the thermal image data of the least one region of the face to
5 thermal image data of a different region of the face.

9. The method of claim 1, wherein providing thermal image data of at least a region of a face of a person comprises:
providing thermal image data of a scene; and
10 selecting thermal image data of the face of the person from the thermal image of the scene.

10. The method of claim 1, wherein providing thermal image data of at least a region of a face of a person comprises:
15 providing thermal image data of a face of the person; and
identifying thermal image data for one or more regions of the face based on at least bilateral symmetry of the thermal image data of the face.

11. A detection system to detect a physiological state of a person, the system
20 comprising:
a thermal infrared image device operable to provide thermal image data of at least a region of a face of a person; and
circuitry operable upon the thermal image data to determine a physiological
state of a person.

25 12. The system of claim 11, wherein the circuitry is operable upon the thermal image data to determine the presence of anxiety in the person.

13. The system of claim 12, wherein the thermal infrared image device is operable to provide thermal image data of at least a region proximate an eye of the person.

5 14. The system of claim 13, wherein the circuitry is operable to compare the thermal image data to a baseline reference.

15. The system of claim 13, wherein the thermal infrared image device is operable to provide thermal image data of at least a periorbital region proximate the
10 eye of the person and of another region of the face, and further wherein the circuitry is operable to compare the thermal image data of the periorbital region to the thermal image data of the other region of the face.

15 16. The system of claim 15, wherein the other region of the face is a cheek region of the face.

17. The system of claim 11, wherein the circuitry is operable to compare the thermal image data to a baseline reference.

20 18. The system of claim 11, wherein the thermal infrared image device is operable to provide thermal image data of at least one region of the face, and further wherein the circuitry is operable to compare the thermal image data of the least one region of the face to thermal image data of a different region of the face.

25 19. The system of claim 11, wherein the thermal infrared image device is operable to provide thermal image data of a scene and to select thermal image data of the face of the person from the thermal image of the scene.

20. The system of claim 11, wherein the thermal infrared image device is operable to provide thermal image data of a face of the person and to identify thermal image data for one or more regions of the face based on at least bilateral symmetry of the thermal image data of the face.

5

Patent Application No. 10/200,000